Appln. No.: 10/523,771

Amendment Dated September 19, 2007 Reply to Office Action of April 19, 2007

<u>Amendments to the Claims:</u> This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

- 1. (Previously Presented) An exhaust system for a lean-burn internal combustion engine comprising a soot filter packed with a mass of elongate, flat, narrow strip metal wherein said mass is compressed to provide a first packing density and a catalyst located upstream of the filter for oxidising NO to NO₂ for combusting soot collected on the filter in NO₂, wherein the catalyst is supported on a metal substrate of the type used in the filter having a second packing density lower than said first packing density, to permit passage of soot particles.
- (Previously Presented) A system according to claim 1, comprising, in order from upstream to downstream, a plurality of metal-based filters adapted successively to trap smaller and smaller particles.
- (Original) A system according to claim 2, comprising at least one wall flow filter for trapping yet smaller particles.
- (Currently Amended) A system according to claim 2, comprising a flow-through monolith between the or-each pair of metal-based filters.
- (Previously Presented) A system according to claim 4, wherein the or each flow-through monolith comprises a NO oxidation catalyst for restoring the NO₂ content, which had been decreased by reaction with soot in the preceding filter.
- (Previously Presented) A system according to claim 1, wherein the filter capacity is sufficient to allow the soot to be combusted continuously by the oxidant.
- (Previously Presented) A system according to claim 1, wherein the filter capacity is sized
 for accumulations of soot sufficient to increase pressure-drop significantly before the
 next period of fast running and the system includes a bypass, wherein the pressure-drop

Appln. No.: 10/523,771

Amendment Dated September 19, 2007

Reply to Office Action of April 19, 2007

through which is equal to the design maximum tolerated pressure-drop through the filter, whereby to avoid engine stalling.

- (Previously Presented) A system according to claim 7, comprising means to limit soot emission to atmosphere located downstream of the bypass, which means being selected from the group consisting of a filter, an impingement collector and an oxidation catalyst.
- (Previously Presented) A system according to claim 1, wherein the filter comprises a regular coiled, woven or knitted structure.
- (Previously Presented) A system according to claim 1, wherein the metal of the filter is Type 300 or Type 400 stainless steel.
- (Previously Presented) A system according to claim 1, wherein the metal from which the
 filter is made comprises an iron alloy containing at least 11.5% Cr, 4% Al and 0.020.25% minor constituents such as rare earth, zirconium or hafnium.
- (Previously Presented) A system according to claim 1, wherein the width of the metal strip of the filter is up to 2 mm and its thickness is 0.2 to 0.8 times its width.
- (Previously Presented) A system according to claim 12, wherein the flat, narrow strip metal is a flattened wire.
- (Previously Presented) A system according to claim 1, wherein the filter packing carries
 a layer catalytic for soot oxidation.
- (Previously Presented) A system according to claim 14, wherein the catalytic layer comprising a washcoat and a component selected from the group consisting of Pt and oxides of Cs and V.
- (Previously Presented) A system according to claim 1, comprising means for generating a component for combusting soot collected on the filter selected from the group consisting of ozone and plasma.

Appln. No.: 10/523,771

Amendment Dated September 19, 2007 Reply to Office Action of April 19, 2007

- (Previously Presented) An internal combustion engine comprising an exhaust system according to claim 1.
- 18. (Original) A diesel engine according to claim 17.
- (Currently Amended) A system according to claim 3, comprising a flow throughmonolith between the or-each pair of metal-based filters.
- (Previously Presented) A system according to claim 19, wherein the or each flowthrough monolith comprises a NO oxidation catalyst for restoring the NO₂ content, which had been decreased by reaction with soot in the preceding filter.
- (Original) A system according to claim 12, wherein the width of the metal strip is in the range 0.1 to 0.5 mm.